# MINERAL RESOURCES INTERNATIONAL LIMITED AR11 1973 annual report

### MINERAL RESOURCES INTERNATIONAL LIMITED

HEAD OFFICE: Suite 401 - 44 Victoria Street Toronto, Ontario

OPERATING OFFICE: 100 - One Calgary Place 330 - 5th Avenue S.W. Calgary, Alberta

### **DIRECTORS**

C. FRANKLIN AGAR HAROLD P. MILAVSKY VICTOR F. BURSTALL WILLIAM A. CLARKE JOHN L. GAIRDNER J. HOWARD HAWKE SAM HASHMAN ZAVE CLIMAN

### **OFFICERS**

C. FRANKLIN AGAR, President HAROLD P. MILAVSKY, Vice-President VICTOR F. BURSTALL, Secretary

### REGISTRAR AND TRANSFER AGENT

MONTREAL TRUST COMPANY Toronto, Montreal, Winnipeg, Calgary and Vancouver

### **AUDITORS**

TOUCHE ROSS & CO. Calgary, Alberta

### **SOLICITORS**

BURSTALL, CLARKE, JONES & COADY, Calgary, Alberta

### SHARES LISTED

"MRI" The Montreal Stock Exchange

THE COVER: Typical North Baffin Island landscape with Inset top: Settlement of Arctic Bay, 17 miles southwest of Strathcona Sound mine site. Centre: Hercules aircraft landing on frozen lake surface near Strathcona Sound and lower picture: Surface work at Strathcona Sound mine site.

# report to the shareholders

During 1973 the Company's activity was centered on development of the Strathcona Sound zinc-lead-silver mining project on Baffin Island in the Canadian Arctic. Substantial progress was made on this major mining project involving many pioneering approaches to problems, the solutions of which are most important to the project and to the Company.

After the 1973 field season and completion of the Watts, Griffis and McOuat production feasibility study, negotiations were undertaken toward marketing and financing arrangements. A "Heads of Agreement" has been signed with Metallgesellschaft A.G. and Billiton B.V., two major mining and smelting companies, which provides for these companies to purchase the metal concentrates to be produced from the mine, to provide a major portion of the capital cost of the project as loans, to provide interim bridge financing, and to contribute management talent to the project. This Agreement is subject to Board approval of both companies.

Negotiations are proceeding toward completing financing of the project and reaching agreement for Federal and Territorial Government approval and support of the project. In the interim, construction activities were initiated on site in April of 1974 aimed at bringing the mine into production in 1976 at an estimated capital cost of some \$50,000,000.

Adjacent to the Strathcona Sound property, the Company has optioned 979 claims along the same trend of dolomite rock that hosts the Strathcona Sound mineralization. Continued exploration of this property is planned in 1974.

Work by Canex Placer Limited on the Baymag magnesite project, in which the Company holds shares equivalent to 10%, has progressed slower than anticipated and the Canex Placer option has been extended to August 31, 1974.

Recently the Company acquired a 7½% interest in concessions and options of petroleum and natural gas rights off the West Coast of Africa totalling approximately 18 million acres, thus gaining a substantial exposure in the international oil and gas scene where exploration activity can be expected to increase.

The resource property inventory now held by the Company provides diversified exploration and development potential in oil, gas, helium, zinc, lead, copper, nickel, silver, gold, platinum and magnesite, most of which have at least doubled in unit market value in the last year. As is reflected in the Company's financial statements. development of one or more of these assets is required to offset the declining cash flow of the Company's producing oil and gas properties in the U.S. Under terms of the Strathcona Sound project financing arrangements, the partial recovery of the Company's cash investment in this project and the purchase of 400,000 shares from the treasury will provide \$1,300,000+ of new funds for the Company.

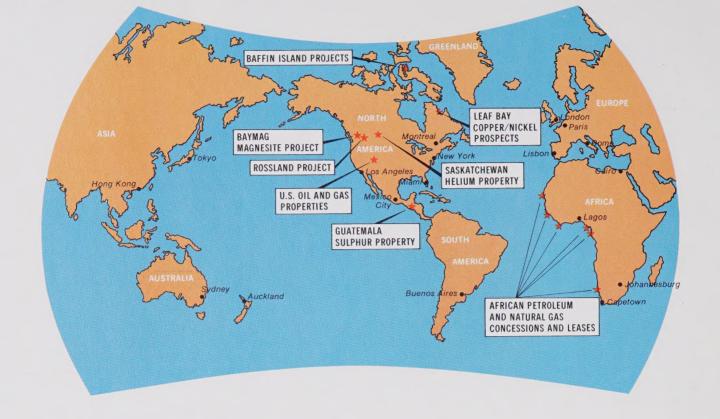
Your directors wish to express their sincere and grateful appreciation to all consulting, service and supply and Government personnel for their dedicated work on the Strathcona Sound mining project.

On Behalf of the Board of Directors

le. F. Ogon

C.F. Agar President

Calgary, Alberta June 1, 1974.



### operations

### **Minerals**

STRATHCONA SOUND MINING PROJECT Our Progress Report dated September 25, 1973 contained a summary of the Watts, Griffis and McOuat Limited production feasibility study. The most important of the conclusions and recommendations made in this study is that on the basis of a 7% equivalent zinc grade cutoff, the main orebody reserves are calculated to total 6,970,000 tons averaging 14.1% zinc, 1.4% lead and 1.8 ounces of silver per ton. Without additions anticipated as a result of further exploration, these reserves are sufficient to support a 1,500-ton per day mining operation for 13 years and Watts, Griffis and McOuat Limited recommended that arrangements be made to bring the property into production.

Extensive negotiations commenced toward establishing marketing and financing arrangements for the project and to gain Government approval and support for the project. These negotiations resulted in a "Heads of Agreement" being signed with Metallgesellschaft A.G. and Billiton B.V., two major mining and smelting companies. Contingent on final approval of the Boards of Directors of these companies and on a degree of infrastructure

support by the Canadian Federal Government. The "Heads of Agreement" provides for:

- 1. Metallgesellschaft and Billiton to purchase all or, under certain circumstances, 80% of the metal concentrates to be produced by the project.
- 2. Metallgesellschaft and Billiton to provide the major portion of the cost of placing the property in production.
- 3. MRI to retain a majority interest in the project and upon closing of the financing agreement, Metallgesellschaft and Billiton to purchase on a discounted basis MRI's right to recover feasibility study and related costs from the cash flow of the project and to purchase 400,000 treasury shares of MRI at \$1.75 per share.

To support banking arrangements, Metallgesellschaft arranged for a check review of the Watts, Griffis and McOuat Limited feasibility study by David S. Robertson & Associates Limited, a Toronto based firm of Geologists and Mining Engineers. Robertson's report confirmed the general conclusions of Watts, Griffis and McOuat Limited and estimated mineable reserves as follows:

GRADE CUTOFF	TONS	EQUIVALENT ZINC GRADE-%			
5% Zinc Equivalent 7% Zinc	8,350,000	12.90			
Equivalent	6,690,000	14.66			

Zinc prices may weaken from the current high levels but are expected to continue to increase during the life of the mine, making it probable that it will be economically feasible to mine to a lower cutoff grade and consequently produce a greater tonnage of ore than that projected by Watts, Griffis and McOuat Limited.

As described in our 1973 Progress Report, there are a number of exploration targets on the Strathcona Sound property which, along with additional reserves expected to be found under the main orebody, should eventually contribute to mill feed, thus extending the life of the project and/or supporting higher production rates.

To facilitate financing and management arrangements for the project a new company, Nanisivik Mines Ltd. has been formed to which MRI will transfer its rights and obligations under the option agreement with Texasgulf, Inc. and Kahulu Creek Mining Company Limited covering the Strathcona Sound property. Utilizing interim bridge financing being provided by Metallgesellschaft and Billiton, final engineering designs are being completed and equipment and materials are being ordered for the 1974 and 1975 sea lifts to Strathcona Sound. The work camp on site was reopened in April of 1974 and accommodation for 70 men was flown in by Hercules aircraft to a landing strip prepared on the ice of Kuhulu Lake. Work is underway on road and site preparation and geotechnical site drilling. Although many items of equipment and materials are in short supply and the logistics of the construction operation are critically tight, we are proceeding toward a target of initiating mine production in 1976.



Above: Entrance to adit into east end of main orebody at Strathcona Sound Below: Banded zinc ore in adit wall.







Original Global/King Campsite

GLOBAL/KING CLAIMS — BAFFIN ISLAND
The Company optioned 979 claims covering
a number of surface showings of zinc and lead
sulphide mineralization and geochemical and
geophysical anomalies along the Society Cliff
dolomite trend stretching for some 95 miles to the
southeast of the Strathcona Sound property.

Under terms of the option agreement, MRI can maintain the option by expending \$100,000 in further exploration of the properties in 1974 and subsequently can extend the option in yearly increments for four years by expending \$300,000 per year in exploration and feasibility study costs. For expenditures beyond \$700,000, MRI will earn an interest of 1% per \$10,000 expended up to 60%. If MRI elects to place the property into production, MRI will earn an additional 20% interest, thus totalling 80%.

Global Arctic Islands Limited and King Resources Company carried out programs of surface prospecting, geochemical and geophysical surveys and limited drilling and trenching on several showings of mineralization within six exploration permits filed several years ago to cover the Society Cliff dolomite trend to the southeast of Strathcona Sound. The 979 claims optioned by MRI were staked to cover exploration leads within the permit areas.

In 1973 a trench 55 feet long on the edge of a large VLF electromagnetic anomaly, some 22 miles from the planned mill site at Strathcona Sound, revealed interesting mineralization similar to that at Strathcona Sound. Assays reported from chip samples of the trench wall averaged 15.4% Zinc and 1.6% Lead over the length of the trench with an average thickness of 5 feet.

Diamond drilling of this VLF electromagnetic anomaly is planned in 1974 as well as additional field exploration work. If reserves of economic grades of zinc/lead mineralization are outlined it may be economically feasible to process the ores in the Strathcona Sound mill and ship the resulting concentrates through the Strathcona Sound project facilities rather than construct separate facilities.

ROSSLAND CLAIMS — BRITISH COLUMBIA The Company holds a 50% interest in a group of claims covering a large serpentine pipe near Rossland, British Columbia. During 1973, assay work indicated that surface samples of the serpentine pipe contained .03 to .04 ounces of platinum per ton.

Subsequent sampling and analysis by several companies interested in acquiring an interest in the claim group did not confirm the initial assays. However, a check sample forwarded to Alfred H. Knight Ltd. in England, specialists in precious metal assay work, gave an assay of .026 ounces of platinum per ton. Further review of assay methods and sampling work will be carried out in 1974.

LEAF BAY CLAIM GROUP, QUEBEC
No work was carried out during 1973 on this 350 claim copper/nickel prospect. Plans for the property are being reviewed with Quebec Sturgeon River Mines Ltd., the Company's 50% partner in the property.

LAKE IXPACO SULPHUR PROPERTY
The Company owns a 50% interest in Azufres de
Guatemala Limitada, a Guatemalan company
holding a sulphur exploration concession covering
a 500,000 ton volcanic sulphur deposit in
Guatemala.

A joint venture agreement was made with Ixpaco Industries Limited whereby they carried out a production feasibility study and plant design and were to put the property into production. Ixpaco Industries have not brought the property into production and the agreement with Ixpaco is in the process of being terminated. Other possibilities for bringing the property into production are being explored.

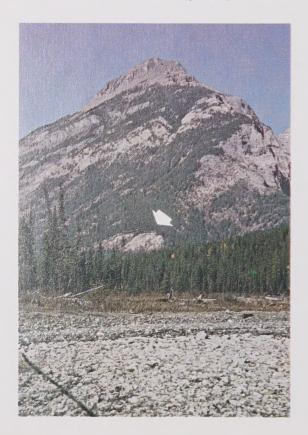
AQUARIUS GOLD JOINT VENTURE
The Company, along with several oil and gas companies and individuals, has agreed to participate in an exploration syndicate managed by Aquarius Mines Ltd. headed by Dr. Warren Geiger of Edmonton. Initially, the syndicate's activities are to be concentrated on six groups of placer or mining claims held by Aquarius in British Columbia. A \$100,000 program is scheduled for 1974. Under terms of the agreement, MRI is to provide for 5% of the joint venture costs to earn a 4% interest in the joint venture properties.

BAYMAG MINES MAGNESITE PROJECT The Company owns 324,480 shares (10½%) of Baymag Mines Co. Limited which holds 300 mineral claims located twenty miles east of Radium Hot Springs in British Columbia covering large high grade deposits of magnesite. The claim group was optioned in January of 1972 to Canex Placer Limited who under terms of the agreement may earn a 51% interest in the project by placing the property in production at a rate of 225,000 tons of dead-burned magnesite per year.

Following diamond coring and bulk sampling of one of the deposits on the property, the unbeneficiated reserves were calculated as follows:

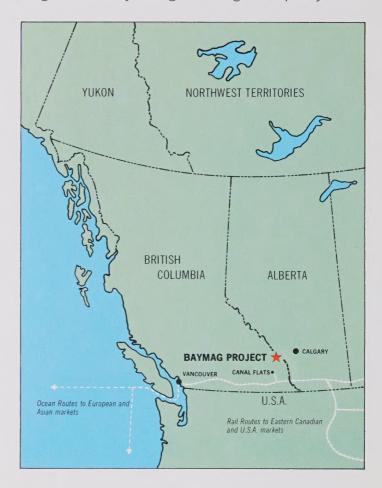
MgO CUTOFF			RAGE DE-%	DE	EAD BI BASI	
GRADE	TONS	MgO	Fe 2 O 3	CaO	SiO2	A1203
90% 95% 96% 97% 98%	21,265,000 14,748,000 10,413,000 5,857,000 1,807,000	96.68 97.15 97.69	.63 .53 .47		.47 .39 .35 .28	.25 .21 .18 .14 .12

Canex Placer Limited carried out pilot plant beneficiation and metallurgical tests, and preliminary project design and cost analysis. Bulk samples of beneficiated material were also sent to U.S. and European refractory companies for testing



and market analyses. Pending completion of this work, the option to Canex Placer Limited has been extended to August 31, 1974.

Market demand for high grade dead-burned magnesite is very strong reflecting the capacity

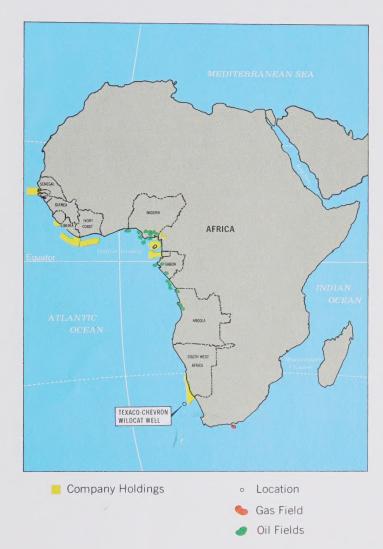


operations of the steel industry and the predominant conversion to basic oxygen furnaces with the attendant requirement of high quality refractory bricks. As a result of this demand, prices in Europe for high quality dead-burned magnesite are now in the range of \$150 per ton.

Dependent on market negotiations, completion of final design and costing studies, and clarification of the situation which will prevail in British Columbia as a result of changes in royalties and taxation applicable to the mineral industry, MRI management is optimistic that the property will be brought into production in the near future.

400 -foot -thick magnesite outcrop near base of Eon Mountain.

# oil and gas



ARACCA OIL AND GAS VENTURE

The Company has joined a group of oil and gas companies headed by Aracca Petroleum Corporation of New York in acquiring and exploring oil and gas permits and concessions on a worldwide basis. Under terms of the agreement, MRI upon payment of \$95,000 (of which final monthly payments of \$11,500 are due in June and July of 1974) will acquire a 7.5% working interest in 18,000,000 acres of petroleum and natural gas concessions, options and applications in the offshore areas of Gambia, Sierra Leone, Liberia, Ivory Coast, South West Africa, Fernando Poo and Equitorial Guinea. Exploration activities in the form of seismic surveys and drilling is underway on or adjacent to several of these areas.

Under terms of the Company's agreement with Aracca, MRI has the option of acquiring an 8% working interest in any concessions obtained by Aracca during the year beginning April 1, 1974 at a cost of 50% of MRI's pro rata share of the costs of acquisition. Aracca is presently negotiating toward the acquisition of oil and gas concessions in several parts of the world.

### U.S. PRODUCING PROPERTIES

Production from the Company's subsidiary International Helium, Inc.'s producing properties continued to decline and as a result sales revenue less production costs decreased from \$73,751 in 1973 to \$66,709 in 1974. Steps are now being taken to sell these properties in that they no longer justify the overhead involved in their management.

#### SASKATCHEWAN HELIUM PROPERTY

The Company continues to hold its interest in a 4,960 acre helium lease covering an estimated 70 billion cubic foot inert gas reserve near Mankota, Saskatchewan. Minor well site maintenance was carried out in 1973. Development of these reserves continues to be forestalled by currently restricted markets. However, tentative approaches were received from interested parties and marketing prospects appear to be strengthening.

Currently the free world supply of helium is dominated by the surplus U.S. reserves with sales being made in the range of \$20 to \$35 per thousand cubic feet. Trade magazine reports suggest however that at the current rate of growth of the U.S. export and domestic market, these supplies will be exhausted by the mid 1980's. At that time it is anticipated that consumers will have to rely on extraction of trace amounts of helium from air at estimated costs of up to \$20,000 per thousand cubic feet of helium. Before this occurs, we expect a turnabout in market conditions and significant price increases.

# consolidated balance sheet at December 31,1973

### assets

	1973	1972
CURRENT Cash Accounts receivable Prepaid expenses	\$ 88,030 19,969 6,548	\$ 30,570 21,463 6,145
	114,547	58,178
MINING PROPERTIES (Note 2) Baffin Island		
- mining property - exploration and development	1,919,451 982,000	1,914,802 150,000
Baymag Mines Co. Limited, at cost	335,171	335,171
Guatemala	50,000	232,200
Other mining properties, at cost	27,767	16,735
	3,314,389	2,648,908
OIL AND GAS LEASES, PLANT AND EQUIPMENT (Note 3) Interest in leases, well costs and equipment, at cost, net of accumulated depletion and depreciation of \$758,442 (1972 - \$729,345) and write down of \$274,510	1,177,913	1,234,561

Signed on behalf of the Board

Director

\$ 4,606,849

\$ 3,941,647

# liabilities

CURRENT	1973	1972
CURRENT Bank loan, secured Accounts payable and accrued Accrued debenture interest Due to shareholders Current portion of long-term debt	\$ 250,000 76,037 9,589 — 14,130	\$ 195,000 118,928 21,143 179,358 12,500
	349,756	526,929
7% CONVERTIBLE DEBENTURES (Note 4)  ADVANCES PAYABLE	330,000 325,000	330,000
DEFERRED PAYABLE, less current portion  NOTE PAYABLE, less current portion	<b>7,500</b>	23,500 6,653
	1,012,256	887,082
shareholders' equity		
CAPITAL STOCK (Note 5) Authorized 10,000,000 shares without par value		
Issued 4,933,841 shares (1972 - 3,183,841 shares)	23,681,449 (20,086,856)	22,801,449 (19,746,884)
	3,594,593	3,054,565

**\$ 4,606,849 \$ 3,941,647** 

# consolidated statement of income and deficit

For The Year Ended December 31, 1973

	1973	1972
Oil and gas sales	\$ 85,269	\$ 100,815
Expenses		
Production expense	18,560	27,064
General overhead (Note 1)	88,505	137,005
Interest, net	37,049	32,428
Abandoned properties and related expenses	33,008	15,588
	177,122	212,085
Loss from production before		
the undernoted items	91,853	111,270
Depletion and depreciation	54,160	78,773
Loss on sale of property, plant and equipment	8,309	35,981
Loss for the year before extraordinary items	154,322	226,024
Extraordinary items		
Write-down of investment in Guatemala (Note 2)	185,650	_
Write-down of Helium leases	_	477,400
NET LOSS FOR THE YEAR	339,972	703,424
Deficit at beginning of year	19,746,884	19,043,460
Deficit at end of year	\$20,086,856	\$19,746,884
Loss per common share:		
Before extraordinary item	\$.03	\$.07
Net loss for the year	\$.07	\$.23

Loss per common share is based on the average of common shares outstanding during the year.

# consolidated statement of source and application of funds

For the Year Ended December 31, 1973

		1973	1972
Source of Funds Issue of shares Increase in long-term debt Proceeds from sale of properties Deferred payable Settlement of current liability Decrease in working capital		880,000 319,130 797 — —	\$ 71,425 25,000 21,173 23,500 22,600 313,911
	\$1	,199,927	\$ 477,609
Application of Funds From operations Loss before extraordinary items	\$	154,322	\$ 226,024
Expense not requiring an outlay of funds  Depletion and depreciation  Write-off of mineral properties  Loss on sale of property, plant and equipment  Loss on foreign exchange		(54,160) (15,983) ( 8,309) ( 5,807)	(78,773) ( 2,751) (35,981) ( 5,224)
		70,063	103,295
Exploration and development - Baffin Island Acquisition of other mining properties and options Reduction of long-term debt Purchase of oil and gas leases, plant and equipment Increase in working capital		832,000 35,114 16,783 12,425 233,542	150,000 173,878 18,347 32,089
	\$1	1,199,927	\$ 477,609
Changes in working capital Increase (decrease) in — Cash Accounts receivable Prepaid expense  Decrease (increase) in — Bank loan Accounts payable and accrued Due to shareholders Accrued debenture interest	\$	57,460 (1,494) 403 (55,000) 42,891 179,358 11,554	\$ (1,556) (3,746) 3,721 (133,190) 33,861 (179,358) (21,143)
Current portion of long-term debt	¢	(1,630) 233,542	\$ (12,500

## notes to consolidated financial statements

December 31, 1973

### 1. Principles of Consolidation and Accounting

The consolidated statements include the accounts of the company and its subsidiary, International Helium Inc.

General overhead expenses have been capitalized to the extent by which they relate directly to the preproduction activity regarding Baffin Island claims.

### 2. Mining Properties

The company's investments are carried at the lower of cost or estimated current value.

### (a) Baymag Mines Co. Limited, at cost

The company owns 324,480 shares of Baymag Mines Co. Limited which is a minority interest in that company. Baymag owns claims covering a magnesite deposit in British Columbia. This property is under option to Canex Placer Limited who are continuing assessment and production feasibility studies in conjunction with European and U.S. refractory companies.

### (b) Guatemala

The company owns 50% of Azufres de Guatemala Limitada which was incorporated to develop a sulphur concession in Guatemala. In 1971 the surface facilities and equipment were sold on an instalment basis with payments commencing May 15, 1972. Because this agreement is considered to be in default, total investment in Guatemala has been written down to reflect the estimated amount recoverable from Azufres de Guatemala Limitada.

### (c) Baffin Island mining property

Under the terms of an agreement dated July 7, 1972 the company disposed of its Mexican Sulphur interests (which were carried at a value of \$1,924,802) in exchange for \$10,000 and an option to manage, finance and develop into production a lead-zinc-silver mineral property on Baffin Island in the Canadian Arctic.

The agreement gave the company the right to carry out a production feasibility study of the property on Baffin Island which was completed in 1973 at a cost of \$690,000. The agreement also gives the company a three year period from December 31, 1973 in which to arrange production financing (Note 7).

By placing the property in production prior to December 31, 1978 at a minimum rate per day, the company will earn a 100% working interest in the project until recovery of development costs. After recovery of development costs, the company and the vendor will be entitled to recover on a pro rata basis the company's predevelopment expenditures and some \$3,130,000 expended on the property to date by the vendor. After recovery of the predevelopment expenditures, the vendor will receive a 35% interest in net profits. Provisions are made in the agreement for extensions beyond the December 31, 1978 date by which commercial production must be attained to December 31, 1983 through advanced royalty payments to the vendor of \$200,000 per year of extension.

#### 3. Oil and Gas Leases, Plant and Equipment

The recoverability of the company's investment in Saskatchewan helium leases is dependent upon development of a suitable market and the construction of processing facilities. The Saskatchewan property is carried at \$997,567, which is the cost of the leases and development expenses which have been incurred.

### 4. 7% Convertible Debentures

The 7% convertible debentures are dated January 31, 1972 and mature January 31, 1975. They are convertible at the option of the holders any time prior to January 31, 1975 at the rate of 200 shares of the company for each \$100 principal amount of the debentures. They are convertible at the option of the company at maturity on January 31, 1975 at the rate of 300 shares of the company for each \$100 principal amount of the debentures.

### 5. Capital Stock

- (a) Authorized capital stock was increased by 4,000,000 shares during 1973.
- (b) Issued stock during 1973 is summarized as follows:

	Shares	Amounts
Balance at beginning of year	3,183,841	\$22,801,449
Issued - for cash for services	1,740,000 10,000	870,000 10,000
Balance at end of year	4,933,841	\$23,681,449

- (c) Share purchase warrants were issued entitling shareholders to purchase 660,000 common shares of the company on or before January 31, 1975 at a purchase price of 50¢ per share.
- (d) Stock options exercisable over a period of five years, are outstanding to two employees for the purchase of an aggregate of 155,000 shares (125,000 shares at 50¢ per share and 30,000 shares at 33¢ per share). No stock options were exercised during 1973.
- (e) The company made arrangements to provide for \$250,000 financing of expenses incurred in the sea lift to the Baffin Island property of supplies, equipment, and fuel required for the 1974 field season. Subject to the approval of all relevant regulatory authorities, the company will issue one share for each seventy-five cents (75¢) of expense incurred.

### 6. Salaries Paid to Directors and Senior Officers

The company has eight directors who received no remuneration as such during the year. The company has three officers whose aggregate remuneration for the year as officers was \$30,000 (1972; \$53,093). All of the officers are also directors.

### Subsequent Event

The company and Metallgesellschaft AG (MG) of West Germany and Billiton International Metals of the Netherlands have entered into Heads of Agreement subject to the approval of the Boards of Directors of MG and Billiton providing for financing of the Baffin Island mining project and purchase of the concentrates produced therefrom. Detailed negotiations are continuing with MG and Billiton.

# auditors' report

The Shareholders. Mineral Resources International Limited

We have examined the consolidated balance sheet of Mineral Resources International Limited and its subsidiary as at December 31, 1973 and the consolidated statements of income and deficit and source and application of funds for the year then ended. Our examination included a general review of the accounting procedures and such tests of the accounting records and other supporting evidence as we considered necessary in the circumstances. We have relied on the report of the auditor who examined the financial statement of the subsidiary.

The ultimate realization of the company's investment in mining properties and oil and gas leases, plant and equipment is dependent upon commencement of commercial production from the related mining leases and concessions and helium properties which would permit such recovery. The eventual outcome cannot be determined at this time.

In our opinion, subject to the uncertainty as to the ultimate realization on the company's investments as described above, these consolidated financial statements present fairly the financial position of the companies as at December 31, 1973 and the results of their operations and source and application of their funds for the year then ended, in accordance with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

Calgary, Alberta February 18, 1974 TOUCHE ROSS & CO. Chartered Accountants.